

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

BAYOU MACON CUTOFF LAKES

LAKE HISTORY & MANAGEMENT ISSUES

February 2015: Prepared by Ryan Daniel, District 2 Biologist Manager

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LAKE HISTORY

GENERAL INFORMATION

The three Bayou Macon Cutoff Lakes are included in this plan. These lakes are impounded oxbows of Bayou Macon, formed during channelization projects for flood control and drainage improvement. These lakes have similarities that include: history of formation, physical features, fisheries aspects, and management issues. The lakes are numbered in order from south to north. A map is shown in [Appendix A](#). Cutoff 1 is commonly referred to as Liles Cutoff or “the shells” since there is a boat launch and parking area constructed of shell material at this lake. Cutoffs 2 and 3 are locally known as Crocket Point and Baker’s Cutoff, respectively.

Date Lake formed

These lakes were formed during the channelization of Bayou Macon in the 1960’s.

Impoundment

The State of Louisiana owns these waterbodies. Each is a historic channel of Bayou Macon.

< <http://doa.louisiana.gov/slo/slabsdataaccess.htm> >

Size (surface area)

Cutoff 1: 320 acres

Cutoff 2: 150 acres

Cutoff 3: 140 acres

Watershed

The watershed consists primarily of agricultural land (cotton, corn, soybean, rice and cattle farms) and small woodlands. There are numerous single-family homes and camps along the shorelines. The watershed to lake ratio is approximately 10:1 for each lake.

Pool Stage

Information unavailable at this time.

Parish

Each of the Bayou Macon Cutoffs lies within Franklin Parish, along the eastern border.

Spillway descriptions

Cutoff 1: 4 ft. x 4 ft. concrete drop box

Cutoff 2: single 36 in. culvert

Cutoff 3: 15 ft. x 19 ft. concrete drop box with (2) 72 in. culverts

Drawdown description

Only Cutoff 3 has a drawdown mechanism. A 4 ft. x 4 ft. manually operated slide gate is installed within the spillway structure. Drawdown potential is 4 feet below pool stage. A mutual agreement between the Franklin Parish Police Jury and the Louisiana Department of Wildlife and Fisheries would be necessary before any drawdowns are conducted.

LAKE AUTHORITY

The Franklin Parish Police Jury is the local governmental authority for the Bayou Macon Cutoff lakes. The Louisiana Department of Wildlife and Fisheries maintains authority for management of fish and wildlife resources in the Bayou Macon Cutoff lakes.

Primary contact information –

- Franklin Parish Police Jury, phone 318-435-9420
- Louisiana Department of Wildlife and Fisheries - District 2, phone 318-343-4044

Maps

Available through the Franklin Parish Police Jury or the Natural Resource Conservation Service

Access

Cutoff 1: public boat launch adjacent to LA Hwy. 128, approximately 5 miles NE of Gilbert, LA
Coordinates: N32°05'30.98" W-91°34'27.90"

Cutoff 2: private boat launch (fee required) off of LA Hwy. 577, approximately 3 miles E of Crowville, LA

Coordinates: N32°14'65.15" W-91°33'20.05"

Cutoff 3: public boat launch at end of Baker's Cutoff Rd., approximately 5 miles S of Delhi, LA
Coordinates: N32°20'27.54" W-91°29'57.42"

Piers

There are numerous private piers on the Bayou Macon Cutoffs associated with residential houses and camps. No public piers are available.

PHYSICAL DESCRIPTION OF LAKE

Shoreline length

Cutoff 1: 20 miles

Cutoff 2: 13 miles

Cutoff 3: 11.5 miles

Timber type

Standing timber within the lake bottom is comprised of bald cypress *Taxodium distichum* adjacent to the shoreline. Timber on the surrounding lands is minimal and comprised primarily of native hardwood species.

Average depth

5 ft.

Maximum depth

18 ft.

Natural seasonal water fluctuation

1-2 ft.

Shoreline development by landowners

Residential with boat houses and piers, some cattle pasture

EVENTS / PROBLEMS

Flooding

Bayou Macon occasionally floods the Cutoff Lakes during extreme high water events, causing the lake levels to rise several feet. The flood water is normally very turbid and has been the associated with fish kills in the past. Homes and camps in the vicinity are typically not impacted. Introductions of non-native species including Asian carp into the Cutoff Lakes are suspected during these flood events.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Coverage of aquatic vegetation is typically limited to emergent species along the shorelines of the Bayou Macon Cutoffs. Alligator weed *Alternanthera philoxeroides*, water primrose *Ludwigia spp.*, and pennywort *Hydrocotyle spp.* have been the most common species. Occasionally, small patches of water hyacinth *Eichhornia crassipes* and duckweed *Lemna spp.* are found in the lakes. Submerged vegetation is limited to scattered coontail *Ceratophyllum demersum* in the shallows. Total coverage of vegetation in each of the lakes is usually considered to be acceptable as fisheries habitat, though control of excessive nuisance vegetation has been necessary at times.

Type map

No vegetation type map surveys have been conducted on the Bayou Macon Cutoffs.

Treatment history by year available

Applications of glyphosate, diquat dibromide, and 2,4-D have been required on occasion to control emergent and floating species. Most of the recent applications have been for water hyacinth and alligatorweed. Duckweed was problematic in the 1980's. Bayou Macon Cutoffs 1 and 3 have required herbicide treatments in recent years. Table 1 (below) includes the annual acreage sprayed on these waterbodies since 2011. Alligator weed is now treated with imazapyr (0.5 gal/acre), while water hyacinth is treated with 2,4-D (0.5 gal/acre) outside of the 2,4-D waiver period (March 15 – September 15) and with glyphosate (0.75 gal/acre) during this period.

Table 1. Annual acres of aquatic vegetation treated with herbicide on the Bayou Macon Cutoffs (BMC) 1 and 3 from 2011 – 2014.

	2011		2012		2013		2014	
<u>Species</u>	BMC1	BMC3	BMC1	BMC3	BMC1	BMC3	BMC1	BMC3
Alligatorweed	18	-	102	-	34	-	-	84
Pennywort	-	-	7	-	-	-	-	-
Water Hyacinth	18	-	17	-	-	10	-	18
Primrose	-	-	13	-	-	1	-	-

HISTORY OF REGULATIONS

Recreational

Statewide regulations for all fish species; the recreational fishing regulations may be viewed at the link below:

<http://www.wlf.louisiana.gov/fishing/regulations>

Commercial

Statewide regulations; the commercial fishing regulations may be viewed at the link below:

<http://www.wlf.louisiana.gov/fishing/regulations>

DRAWDOWN HISTORY

No drawdowns have been conducted.

FISH KILLS / DISEASE HISTORY

There is no documentation of regularly occurring fish kills or disease outbreaks in any of these lakes. In 2008, a significant kill was investigated in all three Cutoff lakes following Hurricane Gustav. The kill affected numerous species and was attributed to hypoxic conditions in the wake of the storm.

CONTAMINANTS / POLLUTION

Water quality

No consumption advisories have been issued for the Bayou Macon Cutoffs.

Water level

No water level records are kept for the Bayou Macon Cutoffs

BIOLOGICAL

Fish Sampling History

Sampling with the fish toxicant rotenone was the primary fisheries sampling method of LDWF from the 1960's through the early 1990's. It was discontinued due to negative public sentiment and availability of alternative sampling techniques. Electrofishing is currently used as the primary largemouth bass *Micropterus salmoides* sampling tool. Fisheries data is also collected through use of various types of nets. Multiple samples with various gears have been conducted on the Bayou Macon Cutoff lakes since the early 1970's and are listed below in Table 2.

Table 2. Summary of fisheries sampling conducted by LDWF on the Bayou Macon Cutoff (BMC) lakes, 1971 - present.

BAYOU MACON CUTOFFS - FISH SAMPLING HISTORY	
1971 - 1984	Biomass: multiple samples on BMC 2 and 3. <i>Note: a biomass sample consists of a 1 acre area blocked off with a net and the fish toxicant rotenone applied throughout, and fish collected for an hour after initial application and again the following morning</i>
2003	Electrofishing: BMC 1, 2, and 3 sampled during spring. <i>Note: electrofishing samples are defined as 15 minutes of time that electrical current is actually being applied into the water. Only largemouth bass and crappie are collected.</i> Seining: BMC 1, 2, and 3. <i>Note: a seine sample consists making 1 drag with a 25 ft. seine net with 3/16" sq. mesh; typically done at a boat launch at night during summer</i>
2004	Seining: BMC 1, 2, and 3.
2005	Seining: BMC 1, 2, and 3. Gill Netting: BMC 1. <i>Note: a gill net sample consists of 4 gill nets of the following mesh sizes fished simultaneously in the same area: 2.5", 3.0", 3.5", and 4.0". Nets typically fished overnight for approx. 24 hrs. during winter.</i> Electrofishing: BMC 1, spring and fall. Electrofishing Forage: BMC 1. <i>Note: an electrofishing forage sample is typically conducted during fall electrofishing though for a shorter time; all species are collected.</i>
2007	Electrofishing: BMC 2, spring and fall.
2008	Electrofishing: BMC 3, spring and fall. Seining: BMC 3.
2009	Electrofishing: BMC 1, spring. Seining: BMC 1.
2013	Electrofishing: BMC 2 and 3, summer.
2015	No Planned Samples
2016	No Planned Samples

2017	No Planned Samples
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Lake records

No lake records compiled.

Stocking History

The only recent fish stockings into the Bayou Macon Cutoff lakes were associated with a restoration effort following a major fish kill caused by Hurricane Gustav in 2008. Largemouth bass, channel catfish *Ictalurus punctatus*, bluegill *Lepomis macrochirus*, and black crappie *Pomoxis nigromaculatus* were stocked into each lake. The numbers stocked each year are listed below in Table 3.

Table 3. Number of fish stocked into the Bayou Macon Cutoff (BMC) lakes following a fish kill associated with Hurricane Gustav in 2008.

<u>Year</u>	<u>Species</u>	<u>BMC 1</u>	<u>BMC2</u>	<u>BMC 3</u>
2008	Florida largemouth bass	3,300	3,300	3,300
2009	Bluegill	16,335	8,136	8,145
	Channel catfish	3,520	926	888
2010	Black crappie	7,128	3,267	2,970
	Channel catfish	3,200	1,500	1,400
	Northern largemouth bass	32,000	15,000	14,000

Genetics

Genetic sampling has not been conducted on these waterbodies.

Species profile

Table 3 lists the fish species documented from the Bayou Macon Cutoffs lakes during standardized fisheries sampling.

Table 3. List of fish species documented from the Bayou Macon Cutoff lakes.

Gar Family, LEPISOSTEIDAE

Spotted gar, *Lepisosteus oculatus* (Winchell)

Longnose gar, *Lepisosteus osseus* (Linnaeus)

Shortnose gar, *Lepisosteus platostomus* (Rafinesque)

Bowfin Family, AMIIDAE

Bowfin, *Amia calva* Linnaeus

Herring Family, CLUPEIDAE

Gizzard shad, *Dorosoma cepedianum* (Lesueur)

Threadfin shad, *Dorosoma petenense* (Günther)

Minnow Family, CYPRINIDAE

- Blacktail shiner, *Cyprinella venusta* (Girard)
- Bullhead minnow, *Pimephales vigilax* (Baird and Girard)
- Common Carp, *Cyprinus carpio* (Linnaeus)
- Emerald shiner, *Notropis atherinoides* (Rafinesque)
- Golden shiner, *Notemigonus crysoleucas* (Mitchill)
- Ribbon shiner, *Lythrurus fumeus* (Evermann)

Sucker Family, CATOSTOMIDAE

- Smallmouth buffalo, *Ictiobus bubalus* (Rafinesque)
- Bigmouth buffalo, *Ictiobus cyprinellus* (Valenciennes)
- Black buffalo, *Ictiobus niger* (Rafinesque)

Freshwater Catfish Family, ICTALURIDAE

- Yellow bullhead, *Ameiurus natalis* (Lesueur)
- Blue catfish, *Ictalurus furcatus* (Lesueur)
- Channel catfish, *Ictalurus punctatus* (Rafinesque)
- Tadpole madtom, *Noturus gyrinus* (Mitchill)
- Flathead catfish, *Pylodictis olivaris* (Rafinesque)

Killifish Family, CYPRINODONTIDAE

- Golden topminnow, *Fundulus chrysotus* (Günther)
- Blackstripe topminnow, *Fundulus notatus* (Rafinesque)
- Blackspotted topminnow, *Fundulus olivaceus* (Storer)

Livebearer Family, POECILIIDAE

- Western mosquitofish, *Gambusia affinis* (Baird and Girard)

Silverside Family, ATHERINIDAE

- Brook silverside, *Labidesthes sicculus* (Cope)
- Inland silverside, *Menidia beryllina* (Cope)

Temperate Bass Family, PERCICHTHYIDAE

- White bass, *Morone chrysops* (Rafinesque)
- Yellow bass, *Morone mississippiensis* Jordan and Eigenmann

Sunfish Family, CENTRARCHIDAE

- Green sunfish, *Lepomis cyanellus* Rafinesque
- Warmouth, *Lepomis gulosus* (Cuvier)
- Orangespotted sunfish, *Lepomis humilis* (Girard)
- Bluegill, *Lepomis macrochirus* (Rafinesque)
- Longear sunfish, *Lepomis megalotis* (Rafinesque)
- Redear sunfish, *Lepomis microlophus* (Günther)
- Spotted bass, *Micropterus punctulatus* (Rafinesque)
- Northern largemouth bass, *Micropterus salmoides salmoides* (Lacépède)
- White crappie, *Pomoxis annularis* Rafinesque
- Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Threatened/endangered/exotic species

Silver carp, *Hypophthalmichthys molitrix* and Bighead carp, *Hypophthalmichthys nobilis* likely occur in these lakes, especially since they are present in great numbers in Bayou Macon, which occasionally backflows into the lakes.

RECREATIONAL ANGLER SURVEY (CREEL)

Historic Information/Type

Recreational angler surveys have not been conducted on any of these waterbodies.

HYDROLOGICAL CHANGES

The Bayou Macon Cutoff lakes were once active channels of Bayou Macon. Bayou Macon originates in southeast Arkansas and flows through the Mississippi Alluvial Valley in northeast Louisiana to its confluence with the Tensas River. A channelization project in the 1960's cut off these lakes from the active Bayou Macon channel. The lakes no longer have significant current flowing through them and water levels remain stable. These lakes are susceptible to sediment accretion from the surrounding agricultural watershed. The results of prolonged sediment accretion will degrade fisheries habitat and will cause a loss in productivity.

WATER USE

Hunting

Permitted, though surrounding properties are private

Skiing

No designated areas

Swimming

No designated swimming areas

Fishing

Fishing is popular, especially with boating anglers. There are no designated shorelines for fishing areas or public fishing piers.

Irrigation

Primarily residential, limited agricultural

Highway Rights of Way

Parking on highway rights of way is prohibited by the Louisiana Department of Transportation and Development.

APPENDIX A

[\(return to general information\)](#)

Map of Bayou Macon Cutoff Lakes

